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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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09/937,082

10/10/2001

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11/09/2007

EXAMINER

LEIVA, FRANK M

ART UNIT

PAPER NUMBER

3714

MAIL DATE

DELIVERY MODE

11/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/937,082

Applicant(s)

ISHII, KATSUHIRO

Examiner

Frank M. Leiva

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 September 2007 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 3-10, 12-19 and 21-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohba et al (US 6,500,069 B1).**

4. **Regarding claims 1, 10 and 19;** Ohba discloses:

A game system performing image generation, comprising:

a memory which stores a program and data for image generating; and at least one processor which is connected to the memory and performs processing for image generating, the processor comprising, (abstract, fig. 2 and col. 9:40-67).

a geometry-processing section which performs three-dimensional perspective transformation on an object being set in an object space specified in a three-dimensional space, including calculation of three-dimensional shape data for the object, (col. 9:40-67).

an intermediate buffer drawing section which temporarily draws an image of a geometry-processed object in an intermediate buffer in place of drawing the image in a frame buffer using three-dimensional viewpoint information provided in the three-dimensional object space, (col.9:40-67), called the frame buffers 122 and 123.

three-dimensional shape data calculated by the geometry-processing section, the drawn image being set as a texture, (col.9:40-67), polygon data.

a frame buffer drawing section which draws the image of the geometry-processed object drawn in the intermediate buffer from the intermediate buffer into the frame buffer; and wherein into the frame buffer, the frame buffer drawing section draws a primitive surface of which drawing positions are specified based on three-dimensional information associated with a position of the object in the object space and on which the image of the geometry-processed object drawn in the intermediate buffer and set as texture is texture-mapped onto the primitive surface, (col.9:40-67), Ohba calls the intermediate buffers (frame buffers) and the final frame buffer is called (memory 132).

5. **Regarding claims 3 and 21;** Ohba discloses wherein when a plurality of primitive surfaces corresponding to a plurality of objects are to be drawn into the frame buffer, the frame buffer drawing section performs hidden-surface removal between the primitive surfaces based on the depth values of the respective primitive surfaces, (9:40-49).

6. **Regarding claims 4, 13 and 22;** Ohba discloses wherein the frame buffer drawing section draws a plurality of primitive surfaces of which drawing positions are specified based on the three-dimensional information of one object into the frame buffer, and makes images texture-mapped over the plurality of primitive surfaces different from one another, (9:60-64).

7. **Regarding claims 5-8, 14-17, 23-26;** Ohba discloses;

A game system performing image generation, comprising:

a memory which stores a program and data for image generating; and at least one processor which is connected to the memory and performs processing for image generating, (abstract, fig. 2 and col. 9:40-67).

the processor comprising: a geometry-processing section which performs three-dimensional perspective transformation on an object being set in an object space specified in a three-dimensional space including calculation of three-dimensional shape data for the

object, (9:40-49).

an intermediate buffer drawing section which temporarily draws an image of a geometry-processed object in an intermediate buffer in place of drawing the image in a frame buffer using three-dimensional viewpoint information provided in the three-dimensional object space and the three-dimensional shape data calculated by the geometry-processing section, (9:54-64).

a frame buffer drawing section which draws the image of the geometry-processed object drawn in the intermediate buffer from the intermediate buffer into the frame buffer; and an image effect section which performs a given image effect processing on the image on the intermediate buffer before the image drawn in the intermediate buffer is drawn in the frame buffer, (9:40-67).

a frame buffer drawing section which draws the image of the geometry-processed object drawn in the intermediate buffer from the intermediate buffer into the frame buffer, wherein the intermediate buffer drawing section draws the image of the geometry-processed object in the intermediate buffer only at a discrete subset of all frames, (9:54-57).

8. **Regarding claims 9, 18 and 27;** Ohba discloses wherein when the images of plural geometry-processed objects are drawn in the intermediate buffer, the intermediate buffer drawing section draws an image of a K-th object in the intermediate buffer at a N-th frame and draws an image of a L-th object in the intermediate buffer at a (N+1)-th frame without drawing the image of a new K-th object in the intermediate buffer, (9:40-59), where is established that the frame buffers hold the polygon data of a plurality of objects Nth amount and the frame buffers are subdivided inherently to Nth number of subdivisions as objects there are.

9. **Regarding claim 12;** Ohba discloses wherein when a plurality of primitive surfaces corresponding to a plurality of objects are to be drawn into the frame buffer, the frame buffer drawing section performs hidden-surface removal between the primitive surfaces

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based on the depth values of the respective primitive surfaces, (9:40-59).

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamamoto et al (US 6,424,353 B2) Z buffer and texture buffer. DiNicola (US 4,951,229) Z planes. Hinami et al (US 6,468,157 B1) viewpoints and perspective.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Leiva whose telephone number is (571) 272-2460. The examiner can normally be reached on M-Th 9:30am - 5:pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FML

11/5/2007



Robert E Pezzuto

Supervisory Patent Examiner

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